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EXAMINER

PALO, FRANCIS T

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 5/20/08 have been fully considered but they are not persuasive.

In the response filed 11/12/07 to the first office action mailed 8/10/07, applicants acknowledge that Anton '317 teaches a biodegradable support which is strengthened with a jute or coconut textile, and further point out that the strengthening textile (grid as claimed) of Anton does not include threads of a biodegradable polymer as claimed.

In response to and affording applicants another non-final office action, the examiner presented Brehm '865 as teaching a biodegradable support (mat) of natural fiber having a biodegradable polymeric reinforcing grid.

Applicants now respond that Brehm '865 does not teach a strengthening grid formed of plant-based threads (as now amended) and that, *“one of ordinary skill in this art would then most certainly not combine Brehm '865 with Anton '317 since the latter does not suggest at all a grid formed of the biodegradable plant-based polymers as defined in applicant's claim-21”*.

Applicants also respond that *“At the outset, applicants are not claiming to be the first inventors of PLA fibres and/or modified viscose threads per se. Indeed, applicants note that such threads and fibres are commercially available as noted in the specification. Applicants' are however claiming to be the first inventors of a biodegradable fibrous support for soil mulching comprising a reinforcing grid associated with at least a part of the support, wherein the grid includes threads formed from a biodegradable polymer which is selected from the group consisting of cellulose, polylactic acid (PLA), viscose, modified viscose, and mixtures thereof.”*

The examiner respectfully responds that both Anton '317 and Brehm '865 teach biodegradable supports of natural fibers, which are reinforced with biodegradable grids, and that the reinforcing grid of Anton is a biodegradable textile or net of jute or coconut, and the grid of Brehm is a biodegradable perforated fiber made of plastic.

Logically then, one of ordinary skill in the art interested in further tailoring the biodegradability of these well-known reinforced mulching mats as they are commonly known, would look to the prior art or commercially available non-woven webs of warp and weft threads applicants refer to as grids. And as applicants admit of specific commercially available prior art cellulose or polylactic grids as claimed, the examiner maintains that one of ordinary skill in the art would be capable of availing themselves of these materials to evaluate in further tailoring the mulching mats.

Furthermore, as the independent claim-21 now recites cellulose as a grid material, Anton can be relied upon as anticipating the amended claim, as the jute utilized in the reinforcing grid as taught by Anton is a strong coarse plant fiber and cellulose as now claimed is the chief constituent of the cell walls of plants.

In the alternative, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have substituted one of the commercially available prior art cellulose or PLA grids as disclosed by applicants for the jute grid of Anton, as a matter of evaluating alternate biodegradable reinforcing grids to tailor the biodegradability of the mulching mat for specific soil applications.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21-26 and 47 are rejected under 35 U.S.C. 102(b),
as anticipated by or, in the alternative, under 35 U.S.C. 103(a),
as obvious over **Anton** (SI 9600317) 1998.

Regarding amended independent **claim-21**:

Anton teaches a biodegradable mulch mat (support) of natural fiber(s) having attached to one or both surfaces a biodegradable reinforcing cover in the form of a textile or net (grid as claimed) made of natural fibers, specifically jute or coconut; wherein the jute material is considered to be a strong coarse plant fiber, and wherein cellulose being the chief constituent of the cell walls of plants and thus a constituent of jute, the jute of Anton is considered to be readable thereon the cellulose as claimed in the instant claim.

In the alternative, one of ordinary skill in the art interested in further tailoring the biodegradability of the well-known reinforced mulching mats as they are commonly known, would look to the prior art or commercially available non-woven webs of warp and weft threads applicants refer to as grids.

And as applicants admit of specific commercially available cellulose or polylactic grids as claimed, the examiner maintains that one of ordinary skill in the art would be capable of availing themselves of these materials to evaluate in further tailoring the biodegradability of the mulching mats, and that it would have been obvious to substitute the commercially available warp and weft thread reinforcing materials referred to in the instant specification as corresponding to the modified viscose thread grid material as claimed (EP A637641 prior art reference) or the PLA reinforcing material;

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as where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing *KSR v. Teleflex*, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)).

Accordingly, applicants claim a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing *KSR*, 127 S.Ct. at 1740, 82 USPQ2d at 1396).

Accordingly, since the applicants have submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.

As to claim-22:

The discussion above regarding claim-21 is relied upon

The use of modified viscose as claimed is discussed above.

As to the remaining pending dependent **claims 23-26 and 47**; as those claims were not seasonally traversed or argued in the response to the previous office action, those rejections are maintained as previously submitted and merely repeated herein this office action below.

Regarding claims 23, 24, 26 and 47:

The discussion above regarding claim-21 is relied upon.

It is logical to expect that the grid of Anton as modified, would be capable of the grid weight claimed, as both Anton as modified and the instant invention teach biodegradable polymers ; further, the instant specification [0018]/[0019] discloses corresponding commercially available grids which would be expected to fall within the claimed weight range (claim-23).

Anton depicts a non-woven layer support with a grid secured thereto one face of the support (readable on claims 24, 26 and 47).

Regarding **claim-25**:

The discussion above regarding claim-21 is relied upon.

The examiner maintains that the spattering of latex onto the support of Anton inadvertently glues the grid as recited in the claim; and, the examiner further takes official notice that the practice of gluing grids onto supports is well known in the art, and would have been an obvious modification to Anton at the time the instant invention was made, as a functional equivalent attachment means.

As to the remaining pending dependent **claims 27, 28 and 42**: as those claims were not seasonally traversed or argued in the response to the previous office action, those rejections are maintained as previously submitted and merely repeated herein this office action below, with the exclusion of the previous reliance on Brehm '865 as the reference is no longer needed in consideration of the amendment to the independent claim as discussed above in the response to arguments section.

Claims 27, 28 and 42 are rejected under 35 U.S.C. 103(a),
as being unpatentable over **Anton** as applied to claim-21 above,
and further in view of **Weber** (US 5,163,247) 1992.

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Regarding **claims 27, 28 and 42**:

The discussion above regarding claim-21 is relied upon.

Anton '317 is not specific to thermobonding fibers as claimed.

Weber '247 teaches synthetic reinforcing fibers may be incorporated into a fibrous cellulose web (col.-3, line-40 thereabout.

It would have been obvious to one of ordinary skill in the art at the time the invention was made, to have modified the support of Anton to include reinforcing fibers in the range claimed, as Weber teaches enhancing the integrity and useful life of the cellulose-based support by the addition of synthetic reinforcing fibers such as polyesters, which are thermosetting and therefore read as thermobonding fibers as claimed.

Further, applicants disclose [0008] document EP-A-637641 teaches a non-woven support composed of filaments produced entirely of a polymer or a polymer mixture derived from lactic acid.

It is further submitted that it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have utilized the lactic acid derived filaments as taught by the EP '641 reference, in the support of Anton as modified by Brehm and Weber; as where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement,"

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the claim is unpatentable under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing KSR v. Teleflex, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)).

Accordingly, applicants claim a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing KSR, 127 S.Ct. at 1740, 82 USPQ2d at 1396).

Accordingly, since the applicants have submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a) because it is no more than the predictable use of prior art elements according to their established

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis T. Palo whose telephone number is 571-272-6907. The examiner can normally be reached on M-Tu.,Th.-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mansen can be reached on 571-272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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/Francis T. Palo/
Primary Examiner
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